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Academic Programs Currently Offered in Wisconsin Colleges and Universities

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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Prepared for the

Coordinating Committee for Higher Education
by the Joint Staff

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Introduction

A description of the existing programs in all of the institutions of higher learning in the state is a necessary preliminary step in the development of a unified, long-range plan for Wisconsin's public colleges and universities. It should be recognized, however, that the programs throughout the state are constantly changing and revisions in the material presented herein should be made periodically in order to maintain balance in the planning endeavors.

Wisconsin offers full-fledged programs in almost all of the academic fields. Among those few fields in which a complete program is not available in this state are architecture, forestry, and veterinary science.

From time to time the need for more graduate work in teacher education in different parts of the state has been expressed. The University of Wisconsin and the Wisconsin State Colleges are now working on the development of a program of cooperation in this area which will be submitted to the proper authorities in the near future.

Accreditation

The following colleges have been accredited by the North Central Association of Colleges and Secondary Schools; the regional accrediting agency:

University of Wisconsin, Madison	1900
University of Wisconsin--Milwaukee	1915
Wisconsin State College, Eau Claire	1950
Wisconsin State College, La Crosse	1928
Wisconsin State College, Oshkosh	1915
Wisconsin State College, Platteville	1918
Wisconsin State College, River Falls	1935
Wisconsin State College, Stevens Point	1916
Wisconsin State College, Superior	1916
Wisconsin State College, Whitewater	1915
Alverno College, Milwaukee	1951
Beloit College, Beloit	1913
Cardinal Stritch College, The, Milwaukee	1953
Carroll College, Waukesha	1913
Lawrence College, Appleton	1913
Marquette University, Milwaukee	1922
Milwaukee-Downer College, Milwaukee	1913
Mount Mary College, Milwaukee	1926
Northland College, Ashland	1957
Ripon College, Ripon	1913
St. Norbert College, West De Pere	1934
Stout State College, Menomonie	1928
Viterbo College, La Crosse	1954

AGRICULTURE

Agricultural programs are available at three state institutions -- the University of Wisconsin in Madison and the state colleges at Platteville and River Falls. The latter two offer undergraduate majors in Agricultural Education and General Agriculture while the University offers thirty-eight undergraduate majors (see Table I), programs leading to the master's and doctors degree as well as the work in research and extension.

University of Wisconsin

Undergraduate Programs. Undergraduate programs on three levels -- the Long Course, Middle Course, and Short Course -- are offered at the university in Madison. The Long Course is the full four-year program. It permits students to complete the normal general education requirements in liberal arts and other fields as well as to select a major in one of the specialized branches of agriculture. Upon completion, the Bachelor of Science degree is conferred in Agriculture, Agriculture and Education (for those planning to teach) or Agriculture and Naval Science (for those completing the necessary credits in Naval Science).

The Middle Course is designed for students interested in the practical aspect of agriculture. This is a two-year program with a limited amount of work (15 credits) outside the field of agriculture. The title Graduate in Agriculture is granted to students completing this program.

The University offers a Farm Short Course consisting of three winter periods of five weeks each. This program is designed specifically for the farmer or prospective farmer who wishes some training in the natural and social

sciences as they relate to his work on the farm. A certificate is awarded to those completing this program.

A Winter Dairy Course is also provided by the University to train men in the dairy industry to understand the more modern manufacturing methods. Non high-school graduates may enroll in this course if they have at least six months of practical experience in a dairy manufacturing plant.

Graduate Programs. Graduate work at the University in the field of Agriculture includes course offerings leading to the Master of Science degree with a major in Agricultural Economics, General Agriculture, Agricultural Journalism, Agronomy, Animal Husbandry, Bacteriology, Biochemistry, Dairy and Food Industries, Dairy Husbandry, Entomology, Genetics, Wildlife Management, Plant Pathology, Poultry Husbandry, Soils and Veterinary Science. Further graduate study leading to the Doctor of Philosophy is available in Agricultural Economics, Agricultural Journalism, Agronomy, Animal Husbandry, Bacteriology, Biochemistry, Dairy and Food Industries, Dairy Husbandry, Entomology, Wildlife Management, Genetics, Plant Pathology, Soils and Veterinary Science. Joint majors for the Doctor of Philosophy degree are available in Forest Products and Poultry Husbandry.

Extension and Public Service. In cooperation with other governmental agencies and private groups the Agricultural Extension Service provides technical specialists, personnel trainers and administrators in various fields of Agriculture. A large number of specialists work as agricultural agents, home agents, erosion control agents, 4-H club agents and special agents in dairying and forestry. The field work has gradually broadened to include special service in soils and insect control to towns and cities.

Research. The University of Wisconsin has approximately 2500 acres of farm land within the Madison area which is used for general research. It also maintains six branch agricultural experiment stations throughout the state, operates a potato research farm in Oneida County and a dairy cattle research farm in Jefferson County. These facilities make possible extensive research work in all branches of Agriculture.

As to the nature of the Agricultural research work carried on at the University it might best be described by citing some examples of recent research projects:

Effect of processing techniques on market quality of poultry products

Methods of economic use of electric light, heat and power for all phases of the dairy farmstead

Antibiotics for use against plant pathogens

Studies on certain chemically active sterols

Factors influencing the attitudes of Wisconsin rural growth toward farming, rural life and education

Investigations of anemias in animals and relations of parasites and minerals to these anemias

Nutritive requirements of poultry with special reference to vitamin and mineral requirements

Detection and control of chronic bovine mastitis

Maintaining and expanding the market demand for dairy products

Ways of attracting or repelling insects from sprayed surfaces

Wisconsin State College, Platteville

A four-year curriculum in Agriculture and Agricultural Education is provided at Platteville. Graduates are awarded the Bachelor of Science degree upon completion of the necessary requirements. The program is primarily designed for the preparation of secondary teachers in agriculture.

Wisconsin State College, River Falls

Agriculture and Agricultural Education curricula are also offered at River Falls. The Bachelor of Science degree is conferred upon graduation. This program is likewise arranged chiefly for those wishing to become high school teachers in agriculture.

Other Offerings

The state and private colleges offering the general liberal arts curricula provide the necessary background for at least one, and in some cases, two years of pre-agriculture.

TABLE I

Agriculture Majors in Wisconsin Colleges and Universities

	University of Wisconsin, Madison	Wisconsin State College, Platteville	Wisconsin State College, River Falls
Agricultural Economics	X	X	X
Agricultural Education	X		
Agricultural Engineering	X		
Agricultural Equipment Industry	X		
Agricultural Extension	X		
Agricultural Journalism	X	X	X
Agriculture — General	X		
Agronomy	X		
Animal Husbandry	X		
Animal Science	X		
Bacteriology	X		
Biochemistry	X		
Canning Industry	X		
Dairy and Food Industry	X		
Dairy Husbandry	X		
Dairy Manufacturing Industry	X		
Entomology	X		
Fertilizer Industry	X		
Food Technology	X		
Forestry (Grad. only)	X		
Genetics	X		
Grain Marketing and Processing Industries	X		
Horticulture	X		
Landscape Architecture	X		
Livestock Feed Industry	X		
Meat and Poultry Products Industries	X		
Plant Pathology	X		
Plant Science	X		
Poultry Husbandry	X		
Pre-Theology (Rural)	X		
Recreation, Community Leadership	X		
Rural Sociology	X		
Seed Industry	X		
Social Science	X		
Soil Conservation	X		
Soils	X		
Veterinary Science	X		
Wildlife Management (Grad. only)	X		

ARCHITECTURE

No collegiate institution offers a course of training in professional architecture. However, very limited training in Architecture at the University and the Milwaukee Institute of Technology is available. The University School of Agriculture offers an undergraduate major in Landscape Architecture leading to the Bachelor of Science degree. Some course work in Home Architecture is available in the Light Building Industry curriculum in the School of Commerce. For those interested in becoming technical assistants in architecture, a two-year course is offered at the Milwaukee Institute of Technology. Three majors in this program are available — Architectural Drafting, Construction and Structural Drafting. One or two years of pre-architecture may be obtained at most of the liberal arts colleges in the state.

BUSINESS ADMINISTRATION

Thirteen colleges and universities offer majors in business courses, although the programs offered at Marquette and the University of Wisconsin are by far the largest offerings. In most cases the smaller schools offer curricula in Business Teacher Education and General Business Administration only.

University of Wisconsin, Madison

Undergraduate Programs. The undergraduate majors offered at the University of Wisconsin are listed in Table II. The Bachelor of Business Administration or Bachelor of Science Degree (if major is Light Building Industry) is awarded upon completion of the four-year program. The Commerce course may also be taken in conjunction with Naval Science providing the student secures the proper number of courses in both fields. Combined work in Commerce and

Engineering is available for those interested in such fields as industrial sales and management. Completion of the necessary work for the bachelors degree in both areas is required. A combined course in Commerce and Law is also available. The student selecting this program completes the B.B.A. requirements in his first year of Law School.

Graduate Programs. The Master of Business Administration degree is offered at the University in accounting, finance, industrial management, labor management, marketing, public utilities and transportation, real estate and urban land economics, risk and insurance. Two types of programs are available — a one-year course for business administration graduates and a special two-year course for graduates in liberal arts, engineering, or agriculture. An off-campus program leading to the Master of Business Administration degree is also offered on the University of Wisconsin--Milwaukee campus under the direction of the School of Commerce in Madison.

The University also offers a Master of Science degree in Business Teacher Education and Actuarial Science. The latter program covers the syllabus for the first four parts of the examinations of the Society of Actuaries.

The Doctor of Philosophy degree is awarded in the following major fields: accounting, finance, industrial management, labor (including labor management), marketing, public utilities and transportation, real estate, risk and insurance, and statistics.

Extension and Public Service. The Bureau of Business Research and Service provides many services to Wisconsin business and industry. The Bureau is concerned particularly with problems relating to the economic development of Wisconsin and the nation and to the management and operation of business

enterprises. The School of Commerce Placement Bureau renders an important service to Wisconsin by bringing together prospective employers and those seeking positions. The School also offers a number of short courses, seminars, institutes and conferences.

Research. In addition to the extensive research carried on by individual faculty members, the Bureau of Business Research and Service carries on concurrent research projects designed to improve the economy of Wisconsin and the United States. A series of monographs known as Wisconsin Commerce Studies, Wisconsin Commerce Papers, and Wisconsin Commerce Reports are the media through which the results of the Bureau's research are disseminated to the public. Below are a few examples of recent research work carried on at the University:

Case studies in sales forecasting

The central business area of Madison, Wisconsin

Urban development problems, especially in Wisconsin

Industrial development in Wisconsin

Trends in Wisconsin population (1940-1950)

Wisconsin State College, Whitewater

Two undergraduate programs in Business Teacher Education are offered at Whitewater: Curriculum "X" is designed for high school graduates with business training and curriculum "Y" is for graduates not having previous training. Both four-year programs lead to the Bachelor of Education degree. A Bachelor of Arts or Bachelor of Science degree in General Business Administration may also be earned at Whitewater. There are two fields of emphasis available -- accounting and secretarial preparation.

Wisconsin State College, Superior

A general business administration major is offered at Superior leading to the Bachelor of Arts or Bachelor of Science degree.

Alverno College, Milwaukee

Alverno offers a Bachelor of Science degree in Business Education in two fields of specialization (teaching and non-teaching). Non-teachers may elect a minor in secretarial science or in a non-business field.

Carroll College, Waukesha

A four-year course in Business Administration leading to a Bachelor of Arts or Bachelor of Science degree is available at Carroll College. For those students training to become secondary teachers a program of work in business administration together with the required Education courses will permit them to teach a number of business subjects (exclusive of typing and shorthand) in the high school. The program leads to the Bachelor of Arts or Bachelor of Science degree.

Dominican College, Racine

The Bachelor of Arts degree in General Business Administration is offered at Dominican College.

Edgewood College, Madison

Two programs are available at Edgewood. A four-year program in Business Teacher Education leads to the Bachelor of Science degree. A two-year plan is

available for those who wish a limited general education background and some specialization in secretarial skills and general office work.

Lakeland College, Sheboygan

Lakeland offers the regular four-year degree program in Business Administration and Business Teacher Education leading to the Bachelor of Science degree. In addition to the baccalaureate degree program there are two two-year curricula for which the Associate in Applied Science is awarded: General Business and Secretarial Studies, both offered at the Sheboygan down-town branch of Lakeland College. A one-year curriculum for students who are primarily interested in achieving competency in the skills subjects in secretarial training is also offered at Lakeland. A certificate of proficiency is awarded upon completion of this course.

Marquette University

Undergraduate Programs. The undergraduate majors at Marquette University are shown in Table II. The Bachelor of Science in Business Administration is conferred upon those completing the prescribed curricula. For those wishing to combine Law and Business Administration, a six-year program is required in which the student completes the requirements for the Bachelor of Science in Business Administration in his first year of law school. The College of Business Administration offers each student an opportunity to take part in a cooperative training program after he has completed his junior year. Cooperative training is offered in all phases of Accounting, Advertising, Banking, Industrial Relations, Insurance, Real Estate, Retailing, Sales, and Transportation. The student may work full time for one semester or part time for two semesters.

Each person on cooperative training is paid at the going rate for the job he holds. On completion of the training period, the employer and a representative of the College cooperatively plan the student's program to best meet his needs as determined by his work experience.

Graduate Programs. The Master of Business Administration degree is offered at Marquette University. The M.B.A. curriculum generally does not consist of majors and minors. It includes only core-courses, courses in the field of specialization (Accounting, Finance, Marketing, and Production and Personnel Management) and elective courses. One year is normally required for those having completed the B.B.A. degree and one to two years for graduates in other fields (Liberal Arts, Engineering, etc.)

Extension and Public Service. The Management Center within the College of Business Administration is designed to provide a variety of services to business and industry such as: (1) Exchange of information of interest to management people at all levels through the conduct of forums and evening institutes in the various fields of management; (2) Cooperation with industry in the development of new methods, techniques and practices; (3) Make accessible to business and industry the result of student and faculty research; (4) Placement service including cooperative students in business and industry.

Research. Programs of research are carried out in the Bureau of Business and Economic Research by students and faculty members individually and in cooperation with personnel from business and industry. Results are published in "Marquette Studies in Business and Economics" and in the bi-monthly periodical, "Marquette Business Memo".

Milton College

Milton College offers the Bachelor of Business Administration degree with emphasis in Accounting. The Bachelor of Arts or Bachelor of Science degree is also available for Business Administration students placing their emphasis in Economics.

Mount Mary College, Milwaukee

This school offers majors in General Business Administration, Business Teacher Education and Secretarial Science leading to the Bachelor of Science degree.

Northland College, Ashland

The Bachelor of Arts degree is awarded to Northland students completing majors in General Business Administration. For those wishing to complete the two-year program only, the Associate in Arts Certificate is awarded.

St. Norbert College, West DePere

General Business Administration and Business Teacher Education majors are available at St. Norbert College. The former includes specialization in Accounting and Organization and Management. Both majors lead to the Bachelor of Science degree.

Other Offerings

Students enrolled in liberal arts colleges or one of the University Extension Centers may generally secure from one to two years of pre-commerce and transfer their credits to one of the above institutions. One, and in some cases two, years of work in Commerce beyond the sophomore year are available at the University of Wisconsin-Milwaukee. This school also offers a substantial number of credit and non-credit courses in the evening primarily for those who have full-time jobs during the day. Two-year business certificate programs are offered in general business, marketing, private accounting, production management and real estate.

Two-year courses in Business Administration leading to the title Associate in Applied Science are offered at the Milwaukee Institute of Technology. Students may select courses in the following fields: Business Administration, Junior Accounting, Secretarial Science and Retail Distribution. The course in Secretarial Science permits technical specialization to prepare the student for special fields of secretarial work.

Northwestern College offers one year of college work to graduates of its commercial department of the high school.

TABLE II

Commerce Majors in Wisconsin Colleges and Universities

	Univ. of Wis., Madison	W.S.C., Superior	W.S.C., Whitewater	Alverno College	Carroll College	Dominican College	Edgewood College	Lakeland College	Marquette University	Milton College	Mt. Mary College	Northland College	St. Norbert College
Accounting	X								X				
Actuarial Science	X												
Banking and Finance	X								X				
Business Adm.--General	X	X	X	X	X	X		X	X	X	X	X	X
Business Adm. & Lib. Arts									X				
Business Economics									X				
Business Teacher Education	X	X	X	X		X			X		X		X
Industrial Management	X												
Labor Management	X												
Law and Business Adm.	X								X				
Light Building Industry	X												
Marketing	X								X				
Naval Science & Bus. Adm.	X								X				
Production & Personnel Mgmt.									X				
Public Utilities & Trans.	X												
Real Estate & Insurance									X				
Real Estate & Urban Land Economics	X												
Risk and Insurance	X												
Secretarial Science											X		
Statistics	X												

DENTISTRY

Marquette University

Marquette University is the sole institution in the state offering the full curriculum in Dentistry. The first two years consist of liberal arts work to give the student the general academic background necessary to begin the study of dentistry. After the proper foundation in laboratory methods and the sciences, the preliminary field is followed by four years in the School of Dentistry. Upon completion, the student receives the Doctor of Dental Surgery degree. Students must complete 210 quarter credits and pass in all branches of the curriculum before becoming eligible for the degree. The nature of the curriculum might best be described by listing the departments together with the number of credits offered by each:

	Credits
Operative Dentistry	20
Pedodontics	5½
Dental Prosthetics	15½
Dentor Materials	6½
Crowns and Fixed Partial Denture Prosthetics	12
Clinical Dentistry	69
Oral and Maxillo-Facial Surgery	11½
Orthodontics	7
Medicine	16
Oral Rehabilitation	1½
Anatomy	23
Physiology	6
Pathology; Bacteriology	18
Pharmacology	4
Biochemistry	8
Dental History; Social Relations	3½
	227 (210 required)

The Bachelor of Science degree is offered in Dental Hygiene and in Public Health Dental Hygiene. The Wisconsin Law provides that licensed dental hygienists may remove calcareous deposits, accretions, and stains from surfaces

of the teeth, provided that they operate under the supervision of licensed dentists. The Public Health Dental Hygienist is especially trained to practice dental hygiene in schools or departments of health. Those requiring permanent certification to practice public health dental hygiene must possess the degree.

A two-year program in dental hygiene is also offered at Marquette for those who do not wish to go into the field of public health. Upon completion of this program the student receives a diploma and may apply to take the examination for a license to practice.

A course in dental assisting is offered each summer and is planned to give students an adequate orientation to the duties of the dental assistant. A Certificate in Dental Assisting is awarded to those completing the course.

Extension and Public Service. A new prosthetic clinic of 35 chairs, a childrens clinic of 30 chairs, and an orthodontic clinic of 15 chairs, as well as X-Ray, examination, consultation and photographic facilities are available in the new Dental-Medical Building. Exodontic and oral surgery clinics are located in the older building. While these facilities are used in the training of dentistry students, they render a service to the general public in the process.

Research. Research projects carried out in the School of Dentistry have added immeasurably to the progress of Wisconsin and the nation in the developments of new techniques and skills in the field of dentistry.

Other Offerings

Two to three years of liberal arts work in any college offering such work is considered ample to admission to a School of Dentistry providing proper

emphasis has been given to laboratory techniques and the sciences required. Therefore, pre-dentistry is available at the University of Wisconsin and most of the liberal arts colleges.

ENGINEERING

Undergraduate programs in engineering and allied fields are offered at the University of Wisconsin, Marquette University, Stout State College, Wisconsin State college, Platteville, Wisconsin Institute of Technology and the Milwaukee School of Engineering. Programs at the Masters degree level are available at the University of Wisconsin and Stout State College. The University of Wisconsin also offers the Doctor of Philosophy degree in the basic engineering fields.

University of Wisconsin

Undergraduate Programs. The engineering majors at the University of Wisconsin are listed in Table III. All programs lead to the Bachelor of Science degree. The Bachelor of Naval Science degree offered by the School of Engineering is discussed later in this report. Engineering work may be combined with Commerce with degrees awarded in both fields, an undergraduate degree in engineering in preparation for the Master of Business Administration degree or two years of pre-commerce work in the School of Engineering with the Bachelor's degree awarded in Commerce. A combined course in engineering and law may be arranged at the University. The student completes three quarters of his work in engineering, enters the law school, and finishes his senior year of engineering while in law school. He may choose to remain his senior year in the school of engineering and elect a maximum of seven credits from the Law School. A

combined program in Agricultural Engineering and Civil or Mechanical Engineering is designed for those interested in Farm Structures, Drainage, Irrigation, Soil Conservation or Farm Power and Machinery. Other combinations available are Civil Engineering--City Planning and Civil Engineering--Light Building Industry. Both programs require five years after which time the Bachelor of Science degree is awarded in each major.

Students taking a Bachelor of Science degree in any branch of engineering may substitute a limited number of physics courses for engineering courses to secure an Option in Physics. Such an option, corresponding to a short curriculum in engineering physics, requires at least 22 credits in physics.

Graduate Programs. The Master of Science degree in engineering is available at the University of Wisconsin in Mechanics and Biochemical, Chemical, Civil, Electrical, Mechanical, Mining, Mettalurgical and general Engineering. A joint major in engineering and physics is also offered.

Part time graduate instruction leading to the Master of Science degree in the major branches of engineering is offered in the evening on the University of Wisconsin--Milwaukee campus under the direction of the College of Engineering in Madison.

Professional engineering degrees are awarded by the University to those engineers who have proved their ability to plan or design as well as direct engineering work or original investigation along engineering or scientific lines. The professional degrees offered are: Civil Engineer, Mechanical Engineer, Chemical Engineer, Metallurgical Engineer, and Engineer of Mines.

The Doctor of Philosophy degree is awarded in mechanics and Chemical, Civil, Electrical, Mechanical, Mining and Metallurgical Engineering.

Extension and Public Service. The Engineering Experiment Station, Motor Vehicle Research Laboratory, the A-C Calculator Laboratory, the Electric Standards Laboratory and the Gage Laboratory are maintained in part as a public service to the state. Through cooperation with the General Extension Division many forums, clinics and workshops on problems vital to industry are conducted, including the Engineering Institute program. The results of research projects conducted by the College of Engineering are made available to the public.

Research. As is true in several other branches of the University, the College of Engineering has a vast research program continually in process. Part of the program is financed through gifts, federal aid, and contracts. Much of the research work is conducted by aspirants for the M.S. or Ph.D. in various fields of engineering. Cooperative research projects among various departments of engineering and other University departments produce important results not obtainable by isolated research efforts. Examples of recent research projects are:

Motor Vehicle Research

Heat Transmission and Studies of Solar Engines

Effects of Melting Variable on Malleable Iron

Analytic Determination of the Design and Performance of Heavy Duty Busses for Medium-Frequency Induction-Furnaces

Thermodynamics and Reaction Kinetics

Spray Drying and Atomization

Compression Temperature Measurements in Internal Combustion Engines

Design and Construction of High Speed Digital Computer

Removal of Nitrogen Compounds from Sewage Affluent

Plastic Flow of Continuous Beams of Reinforced Concrete

Wisconsin State College, Platteville

An Industrial Arts Major for prospective teachers is the major purpose of the Industrial Arts program at Platteville. Students may elect to take the non-teaching major in preparation for positions in industry. Both programs lead to the Bachelor of Science degree.

Stout State College, Menomonie

Undergraduate Programs. The degree of Bachelor of Science is awarded to students completing major programs in Industrial Education or Vocational Education. In Industrial Education the student may select certain fields of specialization and choose his shop work accordingly. Opportunities are available for some cooperative work in selected industrial institutions. One requirement for the Vocational Education major is that the graduate be eligible for vocational teaching certification (based on certain definitions of trade competency). The Bachelor of Science degree in Industrial Technology is designed for students who wish to prepare for positions in industry. Students may specialize in: Drafting, Electricity, General, Graphic Arts, Metalworking, Motor Mechanics, or Woodworking.

Graduate Programs. Stout also offers the Master of Science degree with majors in Industrial Education and Vocational Education.

Wisconsin Institute of Technology, Platteville

The Institute awards the Bachelor of Science degree in Civil Engineering and Mining Engineering. Three year courses leading to a diploma are also offered in these fields.

Marquette University

Undergraduate Programs. Marquette's School of Engineering confers the following degrees: Bachelor of Civil Engineering, Bachelor of Electrical Engineering, and Bachelor of Mechanical Engineering. Two options are available within the Civil Engineering program--Structural or Municipal.

A cooperative plan in engineering has been established at Marquette. Briefly, the plan involves an integration of classroom work and practical industrial experience in an organized program under which students alternate periods of attendance at college with periods of employment in industry. Students electing this plan are put on the cooperative system before the beginning of their seventh quarter. The student progresses rapidly through the various phases of the firm's engineering processes according to a planned schedule.

Graduate Programs. The professional degree of Civil Engineer, Electrical Engineer or Mechanical Engineer may be awarded by Marquette University upon completion of the necessary requirements.

Extension and Public Service. Marquette University provides a wide range of evening courses in engineering for students who work during the day. Through the cooperative work-study plan, Marquette renders a valuable service to Milwaukee and its surrounding area.

Research. A broad program of research is carried out in the College of Engineering. The Materials Testing Laboratory, Electric Machinery Laboratory, Electronics and High-Frequency Laboratory, Fluid Mechanics Laboratory, Hydraulics Laboratory, Mechanical Engineering Laboratory, Metallography

Laboratory, Machine Shop and other facilities are all available for the conduct of basic and applied research at Marquette University.

Milwaukee School of Engineering

Undergraduate Programs. The Milwaukee School of Engineering offers the Bachelor of Science degree in Mechanical Engineering and in Electrical Engineering with a communication or power option. Two lower levels of study are available and can best be explained in terms of what the Milwaukee School of Engineering calls its Concentric Curriculum. The Technical Service level courses, (available in Electricity, Electronics, Refrigeration Service, and Metals Fabrication) in which the stress is on skills, is six to nine months in duration and lead to the certificate award. The Engineering Technician degree of Associate in Applied Science is the second in the concentric series. This program lasts 18 months. Special emphasis is placed on the preparation of engineering technicians for occupations in industry. Available options: Electronics Communication, Electrical Power, Refrigeration Service and Air Conditioning, Metals Fabrication and Industrial Technician. The third level is the full program leading to the degree.

Selected students may pursue a work-study program in cooperation with some of the leading industries in Milwaukee. The quarter schedule permits a variety of these combination programs.

Graduate Programs. The professional degree of Electrical Engineer is conferred on graduates of Milwaukee School of Engineering who have completed all of the necessary requirements.

Extension and Public Service. The Milwaukee School of Engineering has developed a variety of employee training programs and a wide selection of evening courses. Three categories of educational programs are offered in the evening division -- the supervisory training program for line supervisors, special short courses for specific industries, and special subjects which may be selected at random.

Research. The Industrial Research Institute conducts research projects in engineering and allied fields and provides training for industrial scientists and engineers. The Institute serves as an experimental station for industrial research investigations in applied engineering and as a clearing house on specific scientific information for the public.

The faculty and facilities of the School are used by the Institute in the performance of research and development work for industry. Sponsored research projects are conducted individually in accordance with the term of the research contract.

Other Offerings

In addition to the previously described Master's degree program in engineering offered on the University of Wisconsin-Milwaukee campus by the Graduate School it is possible for the student to get two years of undergraduate work in Chemical, Civil, Electrical, Mechanical, Metallurgical and Mining Engineering. One to two years of pre-engineering work may also be secured at most of the liberal arts colleges and University Extension Centers in the state. A minor in industrial arts is offered at Wisconsin State College, River Falls. Four of the private liberal arts colleges have established three-two plans with schools of engineering whereby the student completes three years in

liberal arts with emphasis on science and mathematics, followed by two years of work at the engineering school. A Bachelor of Science degree is awarded by both schools. The four schools and the cooperating institutions are:

Beloit	-- Columbia University
Carroll	-- Illinois Institute of Technology
Ripon	-- Massachusetts Institute of Technology
St. Norbert	-- Marquette University

The Milwaukee Institute of Technology offers six two-year courses in industrial technology: Automotive, Chemical and Metallurgical, Diesel, Electrical (Electronics of TV Broadcasting), Mechanical and Structural (described previously under architecture), Drafting, Inspection or Foundry. Successful completion of these courses lead to the title "Associate in Applied Science".

Five-year technical engineering courses are also available in the Institute's evening school to enable young employed men to take technical training to up-grade themselves. Specialization is provided for in the fifth year in Electrical, Mechanical and Industrial fields.

ENGINEERING MAJORS IN WISCONSIN COLLEGES AND UNIVERSITIES

	Univ. of Wisconsin, Madison	WSC Platteville	Stout State College	Wis. Inst. of Technology	Marquette University	Milwaukee School of Eng.
Agricultural Engineering	X					
Chemical Engineering	X					
City Planning	X					
Civil Engineering	X			X	X	
Electrical Engineering	X				X	X
Engineering and Naval Science	X					
Industrial Arts Education		X				
Industrial Arts		X				
Industrial Education			X			
Industrial Technology			X			
Mechanical Engineering	X				X	X
Mechanics	X					
Metallurgical Engineering	X					
Mining Engineering	X			X		
Vocational Trade and Industrial Education			X			

FINE ARTS

The various undergraduate majors in fine arts at Wisconsin's institutions of higher learning are shown in summary form in Table IV.

University of Wisconsin, Madison

Undergraduate Programs. A major leading to the Bachelor of Arts degree is available in dramatics (a field of specialization within the speech major). The Bachelor of Science degree is awarded in applied art, art education, and dance (a specialization within the physical education major). The Bachelor of Music degree is awarded with majors in applied music, music history and theory, and school music (with emphasis in instrumental or vocal fields).

Graduate Programs. The Master of Arts degree is awarded with a major in Art History or Music. The Master of Music degree is also available for music majors. The Master of Science degree is awarded in Music and Education, Art, and Art Education.

The Doctor of Philosophy degree may be earned in Art History. Art and Art Education is available as a minor to Ph.D. candidates in education. Music may be taken as a joint major by Ph.D. candidates.

University of Wisconsin--Milwaukee

Undergraduate Programs. The Bachelor of Science degree is awarded to majors in art education, school music (with specialization in Vocal, Instrumental, or a combination of the two), and dramatics (a specialization within speech major). The Bachelor of Fine Arts is available to majors in music (with specialization in Piano, Voice, Instrumental, or Theory and Composition).

Graduate Programs. The Master of Education degree is offered at the University of Wisconsin--Milwaukee with curricula in Art Education and Music Education (with specialization in Vocal, Instrumental or a combination of the two).

Wisconsin State College, Eau Claire

Majors in music and music education (Comprehensive or Vocal) leading to the Bachelor of Arts or Bachelor of Science degree are offered at Eau Claire. Minors only are offered in art, art education, and dramatics.

Wisconsin State College, Oshkosh

Oshkosh offers the Bachelor of Arts degree with a major in music and/or a minor in art. The Bachelor of Science degree is awarded with majors in music and music education (with specialization in Vocal, Instrumental or a combination of the two), and minors in art or art education. The Bachelor of Education degree is awarded with a major in music education (same fields of specialization) and/or a minor in art education.

Wisconsin State College, Platteville

The Bachelor of Arts or Bachelor of Science degree is offered at Platteville. Music and music education are offered as majors while art and art education are offered only as minors.

Wisconsin State College, River Falls

A major in music and a minor in art are available at River Falls with the Bachelor of Arts or Bachelor of Science degrees being awarded upon completion of the necessary requirements. The Bachelor of Science or Bachelor of Education degree is conferred upon majors in music education. A minor in art education is also available for candidates to the two latter degrees.

Wisconsin State College, Stevens Point

Stevens Point offers a major in music and music education and a minor in art and art education. Upon completion of the necessary requirements the Bachelor of Arts or Bachelor of Science degrees are conferred upon the candidates.

Wisconsin State College, Superior

Undergraduate Programs. The Bachelor of Arts degree at Superior is conferred upon majors in art, fine arts (with specialization in art, music, or dramatic art), applied music and music theory. The Bachelor of Science degree is conferred upon majors in art education and music education.

Graduate Programs. The Master of Education degree may be earned at Superior with majors in art education and music education.

Alverno College, Milwaukee

The Bachelor of Arts degree is available at Alverno with majors in art and music. The Bachelor of Music degree is awarded in the following fields of specialization: applied music, liturgical music, music education, music therapy, music theory, or composition.

Beloit College

Undergraduate Programs. The Bachelor of Arts degree is awarded in Art, Art Education, Music, Music Education, and Speech and Dramatic Arts.

Graduate Programs. The Master of Arts degree may be conferred on students at Beloit with art, music, or dramatic arts as fields of concentration.

Cardinal Stritch College, Milwaukee

The Bachelor of Arts program offers concentration in Art, Art Education, and Music. The Bachelor of Science degree in Music Education is also offered for those electing to prepare for the teaching profession.

Carroll College, Waukesha

Students may major in Music (with specialization in applied music, music theory, public school music or sacred music) or secure joint majors in Speech-Dramatics or Dramatics-English for the Bachelor of Arts degree. A minor in Art is also offered.

Dominican College, Racine

The Bachelor of Music degree is awarded at Dominican College to majors in Music or Music Education.

Edgewood College of the Sacred Heart, Madison

The Bachelor of Science degree is conferred upon students at Edgewood majoring in Art Education. Minors are available in Art and Music (with specialization in Music or Elementary School Music).

Holy Family College, Manitowoc

The Bachelor of Arts degree is offered with majors in Art or Music.

Lakeland College, Sheboygan

Lakeland offers the Bachelor of Arts degree with majors in Music, Music Education (with specialization in instrumental or vocal music), Speech and Dramatic Arts.

Lawrence College, Appleton

The Bachelor of Arts degree is offered at Lawrence in Art, Art Education, and Music. The Bachelor of Music degree is offered at the Conservatory of Music in Music(with piano, piano pedagogy, organ, voice, strings, wind or percussion, and theory and composition options) and Music Education with similar options.

Layton School of Art, Milwaukee

Layton confers the Bachelor of Fine Arts degree in the following fields of art: Painting, Sculpture, Advertising, Design, Fashion Illustration, Industrial Design, and Interior Design. Diplomas may be awarded to high school graduates (or certificates to non-high school graduates) who complete the four-year course in one of the above fields but do not complete all of the academic requirements. A certificate is awarded to those completing the three-year course in Photography.

Extension and Public Service. Evening classes are offered on Tuesday, Wednesday and Thursday in most of the basic art courses. Junior classes for boys and girls, ages six to seventeen are held on Saturday mornings, October to May and on weekdays during the summer term. The exhibition gallery is open to the public.

Marquette University

Undergraduate Programs. Marquette offers the Bachelor of Arts or the Bachelor of Science degree with a major in Speech, including specialization in dramatics and radio and television. The Master of Arts or Master of Science degree is also offered in the above.

Milton College

Milton offers the Bachelor of Arts and Bachelor of Science degrees with a major in Music and the Bachelor of Music Education degree.

Milwaukee-Downer College

The Bachelor of Arts degree is offered at Milwaukee-Downer with majors in Art, Art Education, Applied Music, Music Theory and Music Education. A minor is offered in Music Therapy. The same degree is also offered with a major in Speech and Drama.

Mount Mary College, Milwaukee

Mount Mary offers majors in Arts and Crafts, Speech and Drama, and Music (applied and theory) all of which lead to the Bachelor of Arts degree. The Bachelor of Science degree is offered to majors in Art Education and Music Education.

Northland College, Ashland

Majors leading to the Bachelor of Arts degree in Speech and Dramatics, Music and Music Education are offered at Northland College. An Associate in Arts Certificate may also be awarded to students completing the two-year program in Music or Speech.

Ripon College

Ripon confers the Bachelor of Arts degree with majors in Drama, Applied Music, Music Education, and Music Theory.

Viterbo College, La Crosse

The Bachelor of Art Education and Bachelor of Music Education degrees are offered at Viterbo College for prospective teachers. Liberal Arts students may major in Art or Music (applied or theory options). A minor in Speech-Drama may also be elected.

Wisconsin Conservatory, Inc., Milwaukee

Undergraduate Programs. The Bachelor of Music degree is conferred on students who complete the necessary music requirements (102 credits) and acquire 18 credits at another accredited institution. Options within the music major are: piano, voice, organ, violin, violin cello, and theory and history. An Artist Diploma is awarded to students who have completed the music subjects for the Bachelor degree but who do not have the necessary academic credits. A diploma is awarded for those completing the three-year course and a Teachers' Certificate is awarded for students completing a prescribed two-year program. A certificate is awarded to those completing two years of study who have not met all of the requirements for the prescribed two-year program. Such students must have two years of Harmony and History.

A four-year program leading t the Bachelor of Oratory degree in Dramatic Arts is awarded providing 32 credits from an accredited collegiate institution have been obtained. The Artist Diploma, Diploma and Teacher's Certificate are also available in Dramatic Arts.

Graduate Programs. The Master of Music degree is offered in Composition, Theory, and Applied Music (with instrumental or vocal options).

Extension and Public Service. A branch studio is maintained in the northwestern part of Milwaukee for easier accessibility of students in that area. Under certain conditions lessons may be given in the home.

Other Offerings

The eight University Extension Centers and the Junior Colleges in the state are available for a portion of the preliminary liberal arts work required in the various fine arts curricula. Minor offerings only are available at the following institutions:

Wisconsin State College, La Crosse	—	Music and Music Education
Stout State College, Menomonie	—	Art
Wisconsin State College, Whitewater	—	Art, Art Education, Music, Music Education
Marian College, Fond du Lac	—	Liturgical Music
St. Norbert College, West de Pere	—	Art, Art Education, Music, Music Education

The Milwaukee Institute of Technology, in addition to its two-year liberal arts program, offers two-year courses in Commercial Art, Photography, TV Broadcasting (technical phases primarily), and Telecasting, all of which lead to the Associate in Applied Science award.

TABLE IV

Fine Arts Majors in Wisconsin Colleges and Universities

	Art	Art Education	Art History	Dance	Dramatics	Fine Arts	Music	Music Education	Music-History and Theory
Univ. of Wis., Madison	X		X	X	X		X	X	X
Univ. of Wis.--Milwaukee	X	X					X	X	
WSC, Eau Claire							X	X	
WSC, Oshkosh							X	X	
WSC, Platteville							X	X	
WSC, River Falls							X	X	
WSC, Stevens Point							X	X	
WSC, Superior	X	X				X	X	X	
Alverno	X	X	X		X		X	X	X
Beloit							X	X	X
Cardinal Stritch							X	X	X
Carroll							X	X	
Dominican							X	X	
Edgewood		X							
Holy Family	X							X	
Lakeland							X	X	
Lawrence	X	X					X	X	
Layton School of Art	X								
Marquette							X		
Milton							X	X	
Milwaukee-Downer	X	X					X	X	
Mount Mary	X	X					X	X	
Northland							X	X	
Ripon							X	X	
Viterbo	X	X					X	X	
Wis. Conservatory, Inc.							X	X	

FORESTRY

Undergraduate Program. No institution of higher education offers an undergraduate major in forestry. The School of Agriculture of the University of Wisconsin offers two years of pre-forestry study in cooperation with the United States Forest Products Laboratory. Practically all institutions that offer degrees in forestry require training in the summer forestry camp prior to the junior year. Two closely related undergraduate majors at the University of Wisconsin are Conservation and Planning in the Use of American Resources (an option within the American Institutions major) and Biological Aspects of Conservation--both offered in the College of Letters and Science. Wisconsin State College at Stevens Point offers a major in Conservation, a broader field embracing forestry, wildlife management, water conservation, etc.

One to two years of pre-forestry may also be obtained at most of the colleges offering the liberal arts curriculum. Northland College offers a three-two program in natural resources in cooperation with the School of Natural Resources at the University of Michigan. Students may pursue the following curricula: Conservation, Fisheries, Forestry, Wildlife Management, or Wood Technology.

Graduate Programs. Graduate degrees in forestry likewise are not offered at any of the Wisconsin Colleges and Universities. The University of Wisconsin offers study in the sciences related to forestry. Joint majors can be arranged between forestry and other departments such as plant pathology, entomology, soils and agricultural economics. A major in wildlife management leading to the Master of Science and Doctor of Philosophy degrees is offered at the University.

Research and Public Service. The Forest Products Laboratory is a scientific institution engaged in research for the Forest Service, United States Department of Agriculture, in cooperation with the University of Wisconsin. The final objective of the organization is to guide and stimulate the economic development and maintenance of forests through more efficient utilization. In cooperation with the University, the Laboratory carries out technical investigations in timber mechanics and engineering, timber physics, packing and packaging, plywood, glues and laminated stock, chemical studies, wood perservation, pulp and paper, microstructure and ecology, and timber harvesting and conversion.

HOME ECONOMICS

Degree programs in Home Economics are offered at eight schools in Wisconsin -- the University of Wisconsin at Madison, Wisconsin State College at Stevens Point, Stout State College at Menomonie, Alverno, Cardinal Stritch, Milwaukee-Downer and Mount Mary Colleges, all at Milwaukee and Viterbo College at La Crosse. The University and Stout State College also offer graduate programs.

University of Wisconsin, Madison

Undergraduate Programs. The degree of Bachelor of Science (Home Economics) or Bachelor of Science (Home Economics and Education) are awarded at the University of Wisconsin. Various majors as indicated in Table V are available.

Graduate Programs. The Master of Science degree is offered at the University in the following fields of specialization: foods and nutrition, textiles and clothing, related art, family economics, housing, child development and home economics extension. A general professional major or a joint education and home economics major is also available.

Fields of specialization for the Doctor of Philosophy degree are: human nutrition, experimental foods and family economics. Human nutrition and family economics are offered as joint majors only. Home economics may also be elected as a minor by majors in education and other fields.

Extension and Public Service. The Agricultural Extension Service of the University provides valuable extension programs in home economics and disseminates information through bulletins, radio broadcasts, news articles, correspondence, public meetings and conferences with extension workers.

Research. Through the Agricultural Experiment Station and its branches the University conducts research in home economics giving special attention to community, family, and individual problems.

Wisconsin State College, Stevens Point

The Bachelor of Science degree is offered at Stevens Point with majors in home economics, home economics education and vocational homemaking education.

Stout State College, Menomonie

Undergraduate Programs. Stout offers the Bachelor of Science degree with specialization in home economics, home economics education, dietetics, and vocational homemaking education.

Graduate Programs. Home economics and vocational education programs leading to the Master of Science degree are also offered at Stout. Home economics students may major in home economics education, food and nutrition or clothing, textiles and related art. Vocational education students may select similar majors.

Alverno College, Milwaukee

The Bachelor of Science degree is offered at Alverno with majors in home economics and home economics education.

Cardinal Stritch College, Milwaukee

Foods and nutrition, general home economics, and home economics education programs are offered at Cardinal Stritch. The Bachelor of Arts degree is conferred upon completion of the necessary requirements.

Milwaukee-Downer College

The Bachelor of Science degree is offered with majors in general home economics, home economics education, clothing and textiles and foods and nutrition.

Mount Mary College, Milwaukee

Home economics with options in dietetics, clothing and textiles, home economics education, and general home economics is available at Mount Mary leading to the Bachelor of Science degree.

Viterbo College, La Crosse

Viterbo offers a program in home economics with specialization in home economics education, foods and nutrition or general home economics leading to the Bachelor of Science degree. A minor in clothing is also available.

Other Offerings

Wisconsin State College at Platteville offers a minor in Home Economics thereby permitting students who select this minor to teach home economics in the public schools of Wisconsin.

The Milwaukee Institute of Technology offers two-year programs in Home-making or Restaurant and Hotel Cookery leading to the title Associate in Applied Science. The latter program requires a six-week working period in an approved kitchen during the summer vacation between the first and second years.

TABLE V

Home Economics Majors in Wisconsin Colleges and Universities

	Univ. of Wis. Madison	Wis. St. College Stevens Point	Stout St. College	Alverno	Cardinal Stritch	Milwaukee-Downer	Mount Mary	Viterbo
Child Development	X					X	X	
Clothing & Textiles	X						X	
Dietetics	X		X					
Experimental Foods	X				X	X		X
Foods and Nutrition	X				X	X	X	X
Home Economics Education	X	X	X	X	X	X		
Home Economics Extension	X						X	X
Home Economics - General	X	X	X	X	X	X	X	X
Home Economics Journalism	X							
Home Economics -- Non Professional	X							
Home Economics and Nursing	X							
Institutional Management	X		X					
Related Art	X							
Vocational Homemaking Education	X	X	X					

JOURNALISM

Journalism majors in Wisconsin are offered at the University of Wisconsin, Madison and Marquette University. Graduate programs are offered at both schools.

University of Wisconsin, Madison

Undergraduate Programs. The Bachelor of Arts or the Bachelor of Science degree is offered at Wisconsin with a major in journalism. Journalism may be combined with various area studies which have been developed by the College of Letters and Science. A combined program of Naval Science and Journalism is also available. Agricultural and Home Economics Journalism have been previously mentioned.

Students are expected to concentrate their work in one of the following eight special fields: 1) Daily Newspaper 2) Community Newspaper 3) Advertising and Business Management 4) Journalism-Magazine 5) Journalism Teachers 6) Journalism-Radio 7) Public Relations 8) Communications Media and Public Opinion. Special work is offered for students interested in technical journalism and house publications.

Graduate Programs. Advanced courses in journalism are offered for graduate students desiring to prepare for newspaper or magazine writing and editing, for research in communication media, or for the teaching of journalism in colleges or high schools.

The Master of Arts or Master of Science degree is offered with a major in journalism and the Doctor of Philosophy degree is available with journalism as a minor or joint major.

Extension and Public Service. A number of institutes and conferences are held by the School of Journalism in cooperation with the Extension Division. The daily newspaper and other publications of the University are published with members of the faculty of the School of Journalism acting as advisors.

Research. Research projects in journalism are frequently carried on at the University by faculty and graduate students with the assistance of gifts and special grants.

Marquette University

Undergraduate Programs. The Bachelor of Arts and Bachelor of Science degrees in Journalism are awarded by Marquette University. Students are required to select a field of specialization from one of the following: 1) News-Editorial 2) Advertising 3) Radio.

Graduate Programs. The Master of Arts or Master of Science degree is awarded at Marquette University with a major in journalism.

Other Offerings

Journalism minors are offered at the University of Wisconsin-Milwaukee, Wisconsin State Colleges at Eau Claire, Oshkosh, River Falls and Superior, and Stout State College at Menomonie.

The Milwaukee Institute of Technology offers two-year courses in Photography and Printing and Publishing (with options in typography and presswork) leading to the Associate in Applied Science title.

A three-year certificate course in Photography is offered at Layton School of Art.

LAW

Two schools offer law curricula in Wisconsin—the University of Wisconsin in Madison and Marquette University in Milwaukee.

University of Wisconsin, Madison

Bachelor of Laws. The course leading to the degree of Bachelor of Laws is a three-year course. Students normally matriculate upon completion of a bachelor's degree. Students may apply for admission, however, after having completed three years of work leading to the bachelor's degree in arts and science, commerce or engineering and apply the thirty law credits toward both degrees. Students with only two years of college may enroll as special students, take four years of work in the Law School and then apply for admission to the bar. Such students are not eligible for the law degree. The University of Wisconsin Law School Certificate in Law is awarded upon completion of the resident work required. An apprenticeship of at least six months is required for the degree.

Graduate Program. The University Law School offers the Master of Laws and the Doctor of Juridical Science degrees. The latter is offered primarily for the advancement of legal research. It is conducted by the student under faculty supervision or satisfied by part-time service in an agency of the state government.

The Graduate School of the University of Wisconsin offers the Master of Arts or Master of Science degree in Legal Institutions and the Doctor of Philosophy degree with a minor in Law.

Extension and Public Service. The Law School publishes quarterly the Wisconsin Law Review giving special attention to Wisconsin law. The Madison Legal Aid Society provides, with the aid of second and third year law students, legal

services for county residents unable to pay a lawyer's fee.

Research. Student and faculty participation in research makes possible valuable contributions toward the improvement of the legal system in Wisconsin and the nation. Examples of recent research are:

Family Farm Operating and Transfer Arrangements

Uniform Commercial Code

Social History of Law in the United States

Marquette University

Bachelor of Laws. Marquette offers the Bachelor of Laws degree upon completion of the three-year program. Although the four-year undergraduate program is recommended as prerequisite to admission to the Law School it is not required. Combined programs are available in Liberal Arts, Business Administration, etc., whereby the final year of work for the undergraduate degree is earned after admission to the law school.

Extension and Public Service. Marquette University through its student Bar Association provides a close integration between future lawyers and the present day leaders of the legal profession. The Marquette Law Review, published quarterly, contains a wide variety of articles on legal subjects. The Law Placement Bureau secures information on job opportunities, arranges interviews between students and employers and aids students and graduates in securing employment.

LETTERS AND SCIENCE

Each of the degree-granting liberal arts colleges and universities in the state offers one or more undergraduate majors in the field of Letters and Science. The majors and minors are indicated in Table VI. They have been

separated into four major areas:

A. Physical Science and Mathematics

B. Biological Science

C. Humanities

D. Social Science

TABLE VI -- PART A

Physical Science and Mathematics Majors (X) and Minors (O)* at Wisconsin Colleges and Universities

	UW, Madison	UW--Milwaukee	WSC, Eau Claire	WSC, La Crosse	WSC, Oshkosh	WSC, Platteville	WSC, River Falls	WSC, Stevens Pt.	Stout SC, Menomonie	WSC, Superior	WSC, Whitewater	Alverno	Beloit	Cardinal Stritch	Carroll	Dominican	Edgewood	Holy Family	Lakeland	Lawrence	Marian	Marquette	Milton	Milwaukee-Downer	Mt. Mary	Northland	Ripon	St. Norbert	Viterbo
Applied Mathematics and Mechanics	X																												
Astronomy	X																						X						
Chemistry	X	X	X	X	X	X	X	X	O	O	X	X	X	X	X			O	X	X		X	X	X	X	X	X	X	X
Chemistry - Biology			X							X																			
Chemistry - Physics	O		X		X			X	X	O			O				O									X			
General Science										X																			
Geography - Geology	X			O	O			O			X									X				O					
Geology	X																												
History of Science	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X			X	X	O	X	X	X	X	X	X	X	X	O
Mathematics		X																											
Mathematics - Physics	X																												
Meteorology	X			X							X														X				
Natural Science	X	O																											
Physical Geography			X	X				X	O		X									X									
Physical Science	X	X	O	X	X	X	X	O	O	O	X	X	X		X			X	X		X	O	X	X	X	X	X	X	O
Physics																													

* NOTE: Minors are not indicated for those schools offering a major in the same field.

TABLE VI — PART B

Biological Science Majors (X) and Minors (O)* at Wisconsin Colleges and Universities

	UW--Milwaukee	UW, Madison	WSC, Eau Claire	WSC, La Crosse	WSC, Oshkosh	WSC, Platteville	WSC, River Falls	WSC, Stevens Pt.	Stout SC	WSC, Superior	WSC, Whitewater	Alverno	Beloit	Cardinal Stritch	Carroll	Dominican	Edgewood	Holy Family	Lakeland	Lawrence	Marian	Marquette	Milton	Milwaukee-Downer	Mt. Mary	Northland	Ripon	St. Norbert	Viterbo
Bacteriology		X																											
Biol. Aspects of Cons.		X																											
Biology	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	O	O	X	X	X			X	X	X	X	X	X	X
Biology-Chemistry																						X							
Botany	X	X	O																			X							
General Science				X		X		O		O						O									X				
Medical Microbiology	X																												
Natural Science	X			X									X								X								
Physiology	X																												
Zoology	X	X	O																			X							

*Note: Minors are not indicated for those schools offering a major in the same field.

TABLE VI -- PART C

Humanities Majors (X) and Minors (O)* at Wisconsin Colleges and Universities

	UW, Madison	UW—Milwaukee	WSC, Eau Claire	WSC, La Crosse	WSC, Oshkosh	WSC, Platteville	WSC, River Falls	WSC, Stevens Pt.	Stout SC, Menomonie	WSC, Superior	WSG, Whitewater	Alverno	Beloit	Cardinal Stritch	Carroll	Dominican	Edgewood	Holy Family	Lakeland	Lawrence	Marian	Marquette	Milton	Milwaukee-Downer	Mt. Mary	Northland	Ripon	St. Norbert	St. Francis College	St. Francis Seminary	Viterbo
Classics-General	X	X											X		X					X							X	X	X	O	X
Comparative Literature	X																														
English	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	X					
Foreign Languages		X	X							X	X	X	O								O										
French	X	X	X	O	O	O	O	X		O	O	O	X	X	X	O	O	X		X		X		X	X	X	X	X		O	148
German	X	X	O			O	O			O		O	X		X	O			X	X		X		X	X	X	X			O	
Greek	X																				O										
Humanities	X			X																			X								
Italian	X																							X							
Language Arts					X																										
Latin	X	X		O				O		O		O		X	X	O		X			X		O	X				X	O	O	X
Linguistics	X																														
Philosophy	X						O		O	X	X			X	X			X		X		X			O			X	X	X	O
Polish	X																														
Portuguese	X																														
Russian	X																														
Scandinavian	X																														
Slavic Languages	X	X																													
Spanish	X	X	X	O		O			O	O	O	X	X	X	O	O			X		X		X	X	X	X	X				
Speech	X	X	X	O	X	X	X	O	O	O	O	X		X							X	O		X	X	X					
Speech Correction	X	X																			O										
Speech-Education																					X										
Speech-English									O			X		X		X			X				X		X	X	X				O	
Speech-Dramatics																															

*Note: Minors are not indicated for those schools offering a major in the same field.

TABLE VI -- PART D

Social Science Majors (X) and Minors (O)* at Wisconsin Colleges and Universities

	UW, Madison	UW— Milwaukee	WSC, Eau Claire	WSC, La Crosse	WSC, Oshkosh	WSC, Platteville	WSC, River Falls	WSC, Stevens Pt.	Stout SC, Menomonie	WSC, Superior	WSC, Whitewater	Alverno	Beloit	Cardinal Stritch	Carroll	Dominican	Edgewood	Holy Family	Lakeland	Lakeland	Lawrence	Marian	Marquette	Milton	Milwaukee-Downer	Mount Mary	Northland	Ripon	St. Norbert	Viterbo
American Civilization		X																												
American Institutions	X																													
Anthropology	X	X											X																	
East Asian Studies	X																													
Economics	X	X	X	X	X		X		O	X	X	O	X								X		X	X	M	O		X	X	
Economics-Business																				X							X			
Economics-Sociology																														
French Area Studies	X																													
Geography	X	X	X	X	X	O	X		X	O	O	X		X												O		X		
Geography-Geology										X																				
Government													X							X								X	
Hispanic Studies	X																													
History	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	O	X	X	X	X	X	X	X
International Relations	X	X																												
Political Science	X	X	X	O	O		O		O	O	O										X		O				X			
Political Science-History																									X					
Psychology	X	X	X	O	O		X				X		X	X							X	X		X		X	X			
Psychology-Philosophy																														
Psychology-Sociology														X																
Regional Planning	X																													
Social Science		X	O		X		X	X	O	O	X		X								O		X							
Social Studies		X		X		O																			X	O				
Sociology	X	X	X	X	O		O	O		O	M	M	X	O			X		X		X	X	X		X	X	X	X	X	X
Sociology-Anthropology	X	O																X												
Sociology-Correctional Adm.	X																													

*Note: Minors are not indicated for those schools offering a major in the same field.

Other College Work in Letters and Science

Two years of liberal arts is offered at the eight extension centers of the University of Wisconsin at Green Bay, Kenosha, Manitowoc, Marinette, Menasha, Racine, Sheboygan and Wausau. Two years of general education courses are available at the Milwaukee Institute of Technology.

Concordia College at Milwaukee offers two years of liberal arts primarily for those training for the ministry.

Both Divine Savior Junior College and Mater Dolorosa College at Milwaukee offer two years of liberal arts.

Northwestern College at Watertown offers a full four-year program in liberal arts leading to the Bachelor of Arts degree. The program at Northwestern is designed primarily for those wishing to enter the ministry.

St. Lawrence Seminary at Mount Calvary and Salvatorian Seminary at St. Nazianz offer two years of liberal arts work for students intending to continue their work at a major seminary.

Graduate Work in Letters and Science

University of Wisconsin, Madison. The Master of Arts degree is offered at the University with majors in Comparative Literature, English, French, Geography, German, Greek, Hispanic Studies, History, Italian, Latin, Political Science, Regional Planning, Russian, Scandinavian Studies, Spanish, Speech, and Zoology.

The Master of Science degree is offered in: Anthropology, Applied Mathematics and Mechanics, Astronomy, Bacteriology, Botany, Chemistry, Economics, Geography, Geology, History of Science, Mathematics, Medical Microbiology, Meteorology, Philosophy, Physics, Physiological Chemistry, Physiology,

Psychology, Regional Planning, Sanitary Chemistry, Sociology, Zoology, and Botany.

The Doctor of Philosophy degree is offered with majors in American Civilization, Anthropology, Astronomy, Bacteriology, Botany, Chemistry, Comparative Indo-European Linguistics, Comparative Literature, Economics, English, French, Italian, Geography, Geology, German, History, History of Science, Mathematics, Medical Microbiology, Meteorology, Philosophy, Physics, Physiological Chemistry, Physiology, Political Science, Psychology, Sanitary Chemistry, Slavic Languages, Sociology, Spanish, Speech and Zoology. Minors are available in Hispanic Studies, Population Studies, Regional Planning, Scandinavian Studies and Statistics.

Beloit College. Beloit offers the Master of Arts or Master of Science degree with majors in Anthropology, Biology, Chemistry, English, Philosophy, Sociology and Speech.

Institute of Paper Chemistry. The Master of Science and Doctor of Philosophy degrees are conferred upon students completing the courses of advanced study in the broad integrated program in the physical sciences important to the pulp and paper industry. Emphasis is on chemistry, physics, chemical engineering, and related pulp and paper technology.

Marquette University. The Bachelor of Arts or Bachelor of Science degree is awarded at Marquette in Biology, Chemistry, Economics, English, French, German, History, Latin, Mathematics, Philosophy, Physics, Physiology, and Speech.

LIBRARY SCIENCE

The Wisconsin State College at Oshkosh is the only school offering an undergraduate major in Library Science. The Bachelor of Science degree is conferred upon those completing the necessary requirements.

Minors in library science are offered at several of the schools in order to prepare students for teacher-librarian positions and to meet the licensing requirement for teacher-librarians in the State of Wisconsin. The following schools offer the library science minor: University of Wisconsin (Madison and Milwaukee), Wisconsin State Colleges at Eau Claire, River Falls, Whitewater and Superior; Cardinal Stritch College at Milwaukee, Milwaukee-Downer College and St. Norbert College at West de Pere.

The University of Wisconsin Library School is a professional school offering a residence training program leading to the Master of Arts or Master of Science degree. The School also offers courses for those wishing to meet pre-professional requirements for the graduate program. A minor in Historical Agencies is offered at the University of Wisconsin in cooperation with the State Historical Society for students taking their Doctor of Philosophy degree in American History.

MEDICINE

The full program in Medicine leading to the Doctor of Medicine degree is offered at the University of Wisconsin, Madison and Marquette University in Milwaukee.

University of Wisconsin, Madison

Undergraduate Programs. Four year courses leading to the Bachelor of Science

degree are available at the University in Medical Technology, Physical Medicine (Therapy), Occupational Therapy (including specialization in music option), and Medical Science. The Medical Science major is restricted to those students qualifying for admission to the Medical School.

Students in this major may be admitted to the Medical School after completion of three years of work. The Bachelor of Science degree is then awarded after completion of the first year of medical school. The B.S. degree is a prerequisite for continuance in the program leading to the M.D. degree.

Certificate courses of 12 months duration are offered in physical therapy and X-ray technology.

Doctor of Medicine. This degree is conferred upon students completing all of the necessary preprofessional, preclinical and clinical work enabling them to practice medicine in the state. Three years are required for the preprofessional period and two years each for the preclinical and clinical. The elective courses available in the preclinical divisio aid the student in acquiring insight and special skill in a single branch. They also offer opportunities for graduates who wish to specialize in some of the medical sciences and to physicians desiring to follow the progress of these sciences as a basis for research. The clinical division consists of 1) an introductory clinical group devoted to a consideration of the broader aspects of clinical medicine and of the major medical specialties, and to practical work in care of patients and 2) the preceptorial group of studies designed to offer individual training in the art and science of medicine through an apprenticeship program.

Fields of specialization available at the University are: Anatomy, Anesthesia, History of Medicine, Medical Microbiology, Medicine, Neurology, Obstetrics

and Gynecology, Oncology, Pathology, Pharmacology and Toxicology, Physiological Chemistry, Physiology, Preventive Medicine, Psychiatry, Radiology, and Surgery.

Master of Science. The Master of Science degree is available in Anatomy, Medical Microbiology, Oncology, Pathology, Pharmacology, Tosicology, Physical Education and Anatomy (women), Physical Therapy, Physical Therapy and Education, Physiological Chemistry and Physiology.

Doctor of Philosophy. This degree is conferred with the following as possible majors: Anatomy, Medical Microbiology, Oncology, Pathology (joint major only), Pharmacology, Toxicology, Physiological Chemistry and Physiology.

Extension and Public Service. The University admits over 16,000 patients a year to University Hospitals. Among the teaching hospitals of the University are: the State of Wisconsin General, the Mary Cornelia Bradley Memorial (for mental disabilities), the Student Infirmary, the Wisconsin Orthopedic Hospital for Children, the Cardiovascular Research Center and the McCardle Memorial Cancer Research Laboratory.

The State Diagnostic Center, a 76 bed short-term psychiatric observation hospital under the administration of the State Department of Public Welfare is also located on the campus of the University. The State Laboratory of Hygiene and the Wisconsin Psychiatric Institute are also located on the campus.

In addition to the services provided through the University Hospitals, the Medical School offers post-graduate training designed to keep physicians informed on day-to-day developments in the medical profession. Refresher and Circuit Courses in the field are conducted by the Medical School faculty.

Research. A large number of research programs in medicine are completed each year and many more long-range studies are in progress. Through its faculty and graduate students and aided by funds from the federal government and private sources, basic and applied research is conducted in practically every branch of medicine. Some advancements of world-wide importance are the direct result of the University's research program. Examples of recent projects:

Internal Metabolism of Nitrogen Compounds

Studies of Cerebral, Cardiac, and Renal Adjustments in High Blood Pressure

Chemical and Structural Factors in Muscular Contraction

Determination of Size and Composition of Cells by X-Ray

Relationship of Hormones to Growth Processes

Metabolism and Enzymes in Cancer Tissue

Mechanism of High Output Heart Failure

Marquette University

Undergraduate Program. Marquette awards a Bachelor of Science degree in Medical Technology and Physical Therapy.

Doctor of Medicine. The curricula leading to the Doctor of Medicine degree is four years in length. Students ordinarily must possess the bachelor's degree for admission to the School of Medicine, although occasionally an exceptionally good student with the minimum three years is accepted. The first two years of work are devoted to an intensive study of the basic medical sciences, but include an introduction to the study of clinical medicine. The last two years are devoted to actual clinical instruction in the hospitals and other institutions connected with the University.

Master of Science in Medicine. This degree is conferred at Marquette with majors in Anatomy, Biochemistry, General Surgery, Internal Medicine, Microbiology and Immunology, Obstetrics and Gynecology, Pathology, Pharmacology, Physical Medicine and Rehabilitation, Physiology, Radiology, and Urology.

Extension and Public Service. Marquette University offers short courses in particular phases of medicine for physicians already in practice. The courses are intended to serve as a review and to help physicians keep abreast of developments in medical science.

In addition, Marquette University offers postgraduate courses and opportunities for postgraduate research in the medical sciences and specialties.

Reciprocal collaboration in medical education exists between the University and a number of hospitals in the Milwaukee area. Such arrangements also exist with the Junior League Curative Workshop (rehabilitation and occupational therapy) and the Milwaukee Cancer Diagnostic Center.

Research. Graduate students and faculty both individually and jointly carry out a wide variety of research projects in medicine. The results of many of the research projects are published in the Marquette Medical Review.

Other Offerings

A number of the liberal arts colleges offer a major in Medical Technology. In most cases the programs permit the student to take three years of work at the College, then complete the twelve months of technical training in an approved school of medical technology. Upon completion of this work, the bachelor's degree is awarded by the former school. The following schools, in addition to the University of Wisconsin and Marquette University offer the program in medical technology:

Wisconsin State Colleges at Eau Claire, La Crosse, Oshkosh, River Falls, Stevens Point, and Superior.

Alverno, Cardinal Stritch, Carroll, Lakeland, Marian, St. Norbert, and Viterbo.

Milwaukee-Downer and Mount Mary College offer a major in occupational therapy.

MILITARY, AIR AND NAVAL SCIENCE

University of Wisconsin

A four-year course in Naval Science leading to the degree Bachelor of Naval Science is available at the University of Wisconsin. Applicants must meet the physical requirements for a Commission in the Navy, be unmarried and less than 25 years of age. The University also offers combined programs in Agriculture, Engineering, Letters and Science, and Commerce and Naval Science for those wishing to enroll in the NROTC program and take their academic work in other fields. Twenty-four credits in Naval Science are prescribed for such combined programs.

Programs in Air Science and Tactics and Military Science are also offered at the University in order that students may meet the compulsory military science requirements.

Marquette University

An engineering unit of the ROTC is established at Marquette University. A NROTC unit is also available and students may combine Naval Science with Business Administration, Engineering or Letters and Science by using Naval Science courses for their electives.

Other schools having Air Force, Military or Naval Science units are:

1. University of Wisconsin—Milwaukee -- ROTC
2. Wisconsin State College, Superior -- AFROTC
3. Lawrence College, Appleton -- AFROTC
4. Ripon College, Ripon -- ROTC
5. St. Norbert, West De Pere -- ROTC

NURSING

Four colleges offer programs in nursing: The University of Wisconsin, Alverno College, Marian College and Marquette University.

University of Wisconsin

The University of Wisconsin offers two programs in nursing:

1) Course in nursing leading to Bachelor of Science (Nursing) degree. Two years of academic work is combined with 27 months of resident professional instruction and a major during the fifth year in Public Health Nursing, Ward Management, or Ward Teaching.

2) A combination of the study of Nursing, with a major in the college of Letters and Science leading to a Bachelor of Arts or Bachelor of Science degree in the general course and also to the Certificate of Graduate Nurse.

The University also offers a major in Physical Medicine for students wishing to specialize in Physical Therapy. This major has been mentioned in the section on Medicine.

In addition to the public service rendered through the University Hospitals and discussed in the section on Medicine, the University assists nurses throughout the state by arranging institutes and clinics and disseminating information on the latest techniques in the field of nursing. Research in nursing is carried on continuously at the University Hospitals.

Alverno College, Milwaukee

The Bachelor of Science degree is offered at Alverno in nursing under two programs: 1) four-year program for high school graduates combining liberal arts and professional nursing courses; 2) program for registered professional nurses to improve their educational background enabling them to fulfill the B.S. requirements and to prepare them for the position of head nurse and assistant clinical instructor in a hospital unit.

Marian College, Fond du Lac

The Bachelor of Science in Nursing Education degree is awarded at Marian College to graduates who have completed the basic professional curriculum in an accredited school of nursing. The facilities of St. Agnes Hospital and St. Agnes School of Nursing are used by the students of Marian College. The courses are planned to help the student integrate the two areas of nursing and education and to prepare her for teaching nurses.

Marian College also offers the freshman curriculum for the St. Agnes School of Nursing diploma program.

Marquette University

The College of Nursing at Marquette offers three programs in Nursing:

1) Bachelor of Science in Nursing, a four-year program for high school graduates
2) Bachelor of Science in Nursing for qualified registered nurses
3) Bachelor of Science in Public Health Nursing for qualified registered nurses

The Master of Science in Nursing degree is also offered at Marquette with curricula in principles of education, recent developments and trends in nursing and nursing education and clinical teaching. The curriculum in Clinical Teaching is of particular importance for those wishing to enter the field of nursing education. Differentiation of area of specialization is attained by means of assignments within specific courses.

The curricula for training in Physical Therapy has been discussed in the section on Medicine.

Other Offerings

One to two years of pre-nursing may be obtained from most of the liberal arts colleges in the state. Cooperative programs with accredited schools of nursing have been arranged at Carroll College, Lakelend College and Milwaukee-Downer College. Viterbo College offers a minor in nursing. Wisconsin State College at Eau Claire cooperates with a local hospital school of nursing by providing an academic program for nurses-in-training during their freshman year. The Milwaukee Institute of Technology offers two types of programs: 1) the professional program whereby nursing students at four local cooperating hospitals are enrolled part time at the Institute for academic and professional courses; 2) the practical program wherein the student receives his basic training at the Institute followed by practice at recognized hospitals and health agencies in

the state. Upon completion of the one-year practical course the student is eligible to write the state licensing examination.

PHARMACY

The University of Wisconsin at Madison is the only institution in the state training professional pharmacists.

Undergraduate Programs. Students planning a career in Pharmacy complete one year in Letters and Science and enroll in the School of Pharmacy at the beginning of the Sophomore year. The Bachelor of Science degree is awarded upon completion of the three years of work in the School of Pharmacy. Students may concentrate their work in one of the following areas: History of Pharmacy, Pharmaceutical Chemistry, Pharmacognosy, Pharmacology, Pharmacy or Pharmacy Administration.

Graduate Programs. The Master of Science degree is offered with the following majors: Pharmacy, History of Pharmacy, Pharmaceutical Chemistry, Pharmacy Administration or Pharmacognosy.

The Doctor of Philosophy degree is offered with the same majors.

Extension and Public Service. School of Pharmacy operates a special laboratory to analyze samples of medicines submitted by the State Board of Pharmacy to assure the high quality of all drugs dispensed in Wisconsin. Institutes for practicing pharmacists are also held from time to time.

Research. Graduate students and faculty individually or cooperatively carry on a continuous program of research in Pharmacy. The results are made available to the practicing pharmacists in the state and interested citizens.

Other Offerings. Liberal Arts colleges in the state generally furnish one year of pre-pharmacy. Students wishing to complete their work in the School of Pharmacy in three years should transfer at the beginning of their sophomore year.

SOCIAL WORK

Social workers are concerned with the adjustment of the individual in society. Their goal is to improve social and economic conditions so that human want and insecurity will be kept at a minimum and to assist people with the adjustment of their social and emotional problems.

Degree programs in Social Work are offered at the University of Wisconsin at Madison and the University of Wisconsin--Milwaukee. Graduate work is also offered at both schools.

University of Wisconsin, Madison

Undergraduate Programs. The Bachelor of Arts or Bachelor of Science degree is awarded with a major in social work. The major is intended for three groups of students -- those wishing a background for graduate study, those wishing social work positions at the end of the fourth year of college, and those who wish to prepare themselves for civic usefulness in their communities.

Graduate Programs. The School of Social Work also offers graduate education in Social Work for persons wishing to secure the adequate professional training for more responsible positions in Social Work. The program consists of academic course work and limited practice in social work agencies under intensive supervision. Upon completion of the two-year program the Master of Science degree is awarded with a major in Social Work. Students may specialize in Social

Work, Correctional Administration or Social Group Work and Group Work-Community Organization.

The Doctor of Philosophy degree with a minor in Social Work may also be secured at the University.

Extension and Public Service. The University Extension Division offers a correspondence study course in Social Work and graduate social work courses in Wisconsin cities where the enrollment is sufficient. Several institutes and workshops are sponsored by the University in cooperation with other agencies. Evening classes are offered in the Madison area for the benefit of employed social workers.

Research. Research work by graduate students is carried out frequently through the assistance of private organizations under faculty guidance.

University of Wisconsin--Milwaukee

Undergraduate Programs. An undergraduate major in Social Work is offered at the University of Wisconsin--Milwaukee. Students are assigned to selected Milwaukee social and recreational agencies for work-study assignments. The Milwaukee undergraduate program is geared to meet the needs of those wishing to do graduate work, enter the profession after the B.S. degree, or prepare themselves for meeting civic obligations in Social Work.

Graduate Programs. The Master of Science degree is awarded to students completing the two-year graduate program in Social Work. The curriculum includes field work assignments with social agencies in the Milwaukee area. This work is carried on under the close supervision of designated agency personnel.

Other Offerings

Pre-professional academic training in Social Work may be obtained at most of the liberal arts colleges in the state. Closer adherence to the course sequence at the Universities in Madison and Milwaukee will be possible at some schools to a greater degree than at others, depending on the breadth of offerings in Sociology.

Carroll College, for example, has worked out a sequence of courses with a major in Sociology-Psychology and a minor in Biology which they have labeled as a pre-professional course in Social Work. Similar programs may be worked out in other schools. Marquette University has organized a volunteer social work program in cooperation with various social agencies in Milwaukee designed to prepare students for later graduate work in an accredited school.

TEACHING

Wisconsin has twenty-eight degree-granting colleges and universities whose work in preparing teachers for certification is recognized by the Department of Public Instruction. The number of degree-granting institutions with either a major or minor offering in the various teaching areas are as follows:

	Majors	Minors	Total
Kindergarten	17	—	17
Elementary	22	—	22
Secondary (General)	25	—	25
Agriculture	3	—	3
Art	11	5	16
Business	8	—	8
Exceptional Children	2	—	2
Physical Education	3	13	16
Home Economics	8	1	9
Industrial Arts	2	1	3
Library Science	1	10	11
Music	21	4	25
Occupational Therapy	2	—	2
Speech Correction	1	2	3

Rural Education. In addition to the above institutions the state has twenty-two county teachers colleges offering two years of elementary education primarily to train teachers for the one-room rural schools in the state. Similar two-year programs are also offered at Marian College in Fond du Lac and at the following state colleges: Eau Claire, La Crosse, Oshkosh, Platteville, River Falls, Stevens Point, Superior and Whitewater. Three-year programs in Rural Education are offered at Oshkosh, Platteville, Stevens Point and Superior. Full four-year degree programs in Rural Education are offered at La Crosse, Oshkosh, Platteville, Stevens Point, Superior and Whitewater.

Kindergarten. Kindergarten teachers are trained at all of the state institutions (except Stout and the Institute of Technology) and at the following private schools: Alverno, Cardinal Stritch, Carroll, Marquette, Milwaukee-Downer and Edgewood. Wisconsin State College at Superior also offers a three-year undergraduate program for the training of kindergarten teachers.

Elementary. Elementary education is offered at twenty-two institutions in the state in addition to the twenty-two county teachers colleges. (see Table VII)

Although most of the programs in Elementary Education are full four-year programs leading to the Bachelor's degree, five schools offer in addition three-year courses leading to certification by the State Department of Public Instruction. These schools are: Viterbo College at La Crosse and Wisconsin State Colleges at Oshkosh, Platteville, River Falls, and Superior.

Students in Elementary Education generally specialize in the primary, intermediate or upper grades, depending on their particular interests. Special curricula in each of these areas is provided by most of the schools.

Secondary. Twenty five colleges in the state offer training in secondary education (see Table VII). The State Department of Public Instruction has established certain minimum requirements for certification to teach high school subjects (exclusive of the special fields): 1) Graduation from an approved four-year course in an accredited college; 2) One major subject (24 semester hours) and two minor subjects (15 semester hours each) or two major subjects (24 semester hours each); and 3) Eighteen semester hours of Professional Preparation. In Table VI, majors and minors available in the field of letters and science have been indicated.

Special Fields. Certification to teach special subjects requires the four-year degree course in an accredited institution, thirty semester hours in the major field and one academic minor (15 semester hours). Special fields offered by Wisconsin Institutions and recognized by the Superintendent of Public Instruction are: Agriculture, art, business education, exceptional children, physical education, home economics, industrial arts, library (minor), music, occupational therapy, and speech correction. The schools offering majors and minors in these fields are shown in Table VII.

Students preparing for teacher-librarian positions may meet the licensing requirements by completing a minor of 15 semester hours. Graduate work in Library Science available at the University is described in another section of this report.

Various fields of specialization are available in some of the special subjects. In Exceptional Education, for example, academic majors are available at the University of Wisconsin--Milwaukee in Education of the Deaf and Hard of Hearing, Education of the Mentally Handicapped and Speech Correction. At Cardinal Stritch College, the only other institution in the state training

teachers for exceptional children, the students may train to become teachers of the mentally handicapped or reading specialists. This program is offered only at the graduate level.

Graduate Programs

University of Wisconsin. The Department of Education joins with other departments in providing combined programs of graduate work for the Master's degree thereby permitting the student to obtain adequate background in the school-subject field as well as the professional education curricula. Joint majors are available in Agricultural Education, Art Education, Botany, Commerce, English, Geography, German, History, Home Economics, Mathematics, Music, Physical Education (men), Physical Education (women), Physical Therapy, Physics, Recreation, Rural Sociology, Speech and Zoology. The Master's degree in education with concentration in elementary education is also offered.

The Doctor of Philosophy degree is offered with a joint major in education and the school-subject field. The various majors in which the Doctor of Philosophy degree is available may be found in the section dealing with that field.

University of Wisconsin--Milwaukee. The Master of Education degree is offered at the University of Wisconsin--Milwaukee in Art Education, Elementary Education, Exceptional Education (with specialization in Education of the Deaf and Hard of Hearing, Education of Mentally Handicapped Children and School Psychometry and Psychology) Music Education, and Secondary Education (primarily professional curriculum).

Wisconsin State College, La Crosse. A Master of Education degree is offered with a major in physical education. The program is confined principally to the summer sessions.

Stout State College, Menomonie. Stout offers the Master of Science degree in Industrial Education, Home Economics Education, Home Economics and Vocational Education.

Wisconsin State College, Superior. The Master of Education degree is offered at Superior. Two plans of study are available: 1) the Professional Plan with curricula in Elementary Education, Secondary Education, Public School Supervision-Administration, and Institutional Teacher Education or Critic Teacher Training. 2) the Comprehensive Plan intended for those wishing a broader approach to the enrichment of his academic preparation, with a minimum of specialization in any field of the profession.

Cardinal Stritch College, Milwaukee. The Master of Arts degree is awarded in Special Education with concentration in teaching of Mentally Handicapped or Reading Specialist.

Marquette University. Marquette offers the Master of Arts degree in Education in Elementary Education, Secondary Education, Educational Administration, Educational Supervision, Measurement in Education, Guidance and Counseling, and Audio-Visual Aids.

Extension and Public Service

University of Wisconsin, Madison. The School of Education maintains the Psycho-Educational Clinic, Reading Clinic, the Learning Laboratory, Instructional Material Center, Statistical Laboratory, Graduate Extension Programs for Wisconsin Teachers, Teacher Placement Bureau, and consulting services for local schools in such areas as administration and curriculum planning. Wisconsin High School provides a six-year program and serves as a laboratory school for prospective teachers.

University of Wisconsin--Milwaukee. Evening classes for in-service teachers, off-campus courses in Education, and Remedial Reading classes are provided by the University. The University maintains a Writing Clinic, Reading Clinic, Hearing Evaluation Clinic and a Speech Clinic. The Laboratory School provides for nursery, two years kindergarten and eight elementary grades.

Wisconsin State Colleges (Wisconsin Institute of Technology excluded). The state colleges, with the exception of Stout, all maintain laboratory school in conjunction with the college. A nursery demonstration class for home economics teachers is provided at Stout. Whitewater also maintains a high school for laboratory purposes. All of the colleges offer summer sessions primarily for teacher education. Extension classes on campus and off-campus courses for teachers are provided by the state colleges. Various conferences, clinics, and workshops for teachers are held throughout the year at all of the schools. The Wisconsin State Colleges sponsor and direct a summer session at the Trees for Tomorrow Camp at Eagle River. A workshop in Arts and Crafts is held each summer at "The Clearing" in Ellison Bay.

Private Colleges. Most of the private colleges engaged in the training of teachers have extension and public service programs similar to that of the state colleges. Without attempting to describe them all, a few examples are given below:

- Cardinal Stritch College offers a summer session in Jefferson to assist in-service teachers working with mentally handicapped children.
- Edgewood College holds late afternoon and Saturday morning in-service courses for teachers.
- Marquette University maintains a Speech and Hearing Clinic, holds special education courses for the in-service training of teachers, and operates Marquette High School.

- Mount Mary College offers a summer session in Milwaukee and also at Prairie du Chien.
- Northland College offers a summer session primarily for the in-service training of teachers.

Research. Research in education is carried out at the various colleges and universities as a natural adjunct to the training of teachers. Those schools offering graduate work have available students who, in the process of developing their own academic backgrounds, engage in research on such problems as curriculum planning, classroom technique, school administration, etc. Recent research projects at the University of Wisconsin are listed below:

- Teacher Acceptance of Pupil Behavior and its Effect on Learning
- Educational Finance Policies in Wisconsin Communities
- The Design of Handwriting Instruments
- Longitudinal Study of Newly Formed Centralized Rural School Districts in Wisconsin.

TABLE VII

Teacher-Education Institutions and Fields for which the Institutions are Accredited by the Wisconsin Department of Public Instruction

X - Major
0 - Minor only

1 - Also offer health minor
2 - Typing and Shorthand not offered
3 - Elementary School Music only
4 - Physical Education (Men) only
5 - Physical Education (Women) only

	Speech Correction	Secondary	Physical Education	Occupational Therapy	Music	Library	Kindergarten	Industrial Arts	Home Economics	Exceptional Children	Elementary	Business Education	Art	Agriculture
UW, Madison	X	X	X(I)		X	0	X		X		X	X	X	X
UW--Milwaukee	0	X	0		X	0	X			X	X		X	
WSC, Eau Claire		X	0		X	0	X				X		0	
WSC, La Crosse		X	X(I)		0		X				X			
WSC, Oshkosh		X	0		X	X	X				X		0	
WSC, Platteville		X	0		X	0	X	X	0		X			X
WSC, River Falls		X	0(I)		X	0	X	0			X		0	X
WSC, Stevens Point		X	0		X		X		X		X		0	
WSC, Superior		X	0		X	0	X				X		X	
Stout State College		X						X	X					
WSC, Whitewater		X	0		0	0	X				X	X	0	
Alverno		X			X		X		X		X	X	X	
Beloit		X			X						X		X	
Cardinal Stritch		X			X	0	X		X	X	X		X	
Carroll		X	0		X		X				X	X(2)		
Dominican					X		X				X			
Edgewood					0(3)		X				X	X	X	
Lakeland		X			X									
Lawrence		X			X								X	
Marian											X			
Marquette	0	X	0(5)								X	X		
Milton		X	0(4)		X									
Milwaukee-Downer		X	X		X	0	X		X		X		X	
Mount Mary		X	X		X		X		X		X	X	X	
Northland		X	0(5)		X									
Ripon		X	X		X									
St. Norbert		X	0		0	0					X	X		
Viterbo		X			X				X		X		X	

THEOLOGY

While the sole purpose of several of the private institutions is the training of young people for the ministry, many private colleges offer a sequence of courses in religion as an integral phase in the development of the whole being, the purpose being to give direction and unity to the goal of intellectual and moral achievement. An attempt is made below to describe briefly the programs which are offered in religion and theology.

Alverno College (Milwaukee) — minor in religion

Beloit College — major in religion

Cardinal Stritch College (Milwaukee) — courses in theology

Carroll College (Waukesha) — majors in Christian Education and Bible

Concordia College (Milwaukee) — two years of liberal arts primarily for students entering theological school

Divine Savior Junior College (Milwaukee) — two years of liberal arts primarily for those aspiring to the religious life

Dominican College (Racine) — courses in theology

Edgewood College of the Sacred Heart (Madison) — courses in theology

Holy Family College (Manitowoc) — courses in theology

Immaculate Conception (Oconomowoc) — Major Seminary of the St. Louis Province of the Order of Redemptorist Fathers

Lakeland College (Sheboygan) — major in religion, including program preparing students for Pastors' Assistants

Lawrence College (Appleton) — major in religion

Lutheran Theological Seminary (Thiensville) — Theological Seminary of the Lutheran Church

Marian College (Fond du Lac) — minor in liturgical music and theology

Marquette University (Milwaukee) — undergraduate minor in Theology; graduate major in Theology leading to Master of Arts degree.

Mater Dolorosa College (Milwaukee) -- two years of liberal arts with courses in theology

Milton College (Milton) -- courses in religion

Milwaukee-Downer College -- four-year course in religious education in preparation for Church vocations

Mission House Seminary (Sheboygan) -- Evangelical and Reformed Major Seminary. Bachelor of Divinity degree offered

Mount Mary College (Milwaukee) -- courses in religion

Nashotah House (Nashotah) -- Major Seminary of the Episcopal Church. Bachelor of Divinity and Master of Sacred Theology degrees awarded

Northland College (Ashland) -- major in Philosophy and Religion

Northwestern College (Watertown) -- four year liberal arts college offering Bachelor of Arts degree. Primarily for preparation of students entering Lutheran ministry

Ripon College (Ripon) -- major in philosophy

St. Francis College (Burlington) -- major in philosophy. Primary aim to train for the ministry

St. Francis Seminary (Milwaukee) -- Major and Minor Seminary offering major in philosophy. Sole purpose is to train candidates for the work of the diocesan clergy.

St. Lawrence Seminary (Mount Calvary) -- Minor Seminary offering two years of liberal arts preparatory to entry into major seminary

St. Norbert College (West De Pere) -- courses in religion

Salvatorian Seminary (St. Nazianz) -- two years of liberal arts preparatory to entry into major seminary

Viterbo College (La Crosse) -- courses in theology

VETERINARY MEDICINE

Wisconsin has no institution which confers the degree of Doctor of Veterinary Medicine. Institutions granting this degree normally require two years of pre-veterinary work. Pre-veterinary courses may be obtained at the University of Wisconsin and Wisconsin State College at River Falls.

Graduate courses in Veterinary Science at the University of Wisconsin are designed to give advance training to graduate veterinarians and other qualified persons interested in research on animal diseases. Programs are offered leading to the Master of Science degree and the degree of Doctor of Philosophy. Special work may be taken in bacteriology, parasitology, pathology and physiology as applied to the veterinary field.